

Preliminary Discussion of Interventions that Improve Report Card Indicators

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This discussion is based on a preliminary review of research that examined interventions with a positive outcome regarding indicators contained in the report card. The search was conducted with an emphasis on cost-effective interventions. It attempts to supplement, rather than duplicate, the discussions in *The Health of Washington State*.

The indicators vary with respect to trends in rates. For example, tobacco use has decreased significantly among adults in the last 25 years. Air quality is generally good. Violent crime has recently declined. On the other hand, current nutrition and physical activity rates leave substantial room for improvement. Current findings regarding effective interventions reflect those trends, suggesting that it is easier to effectively intervene to change nutritional behavior than smoking behavior, simply because smoking behavior has already changed significantly.

Interventions directed toward individual behavioral change have been researched more than environmental interventions. There is substantial writing about environmental interventions, but little research is available at this point regarding their effectiveness.

Many interventions target more than one risk or healthy behavior and therefore in a discussion of physical activity, for example, there will be references to nutrition. Also, many interventions were targeted toward disease (obesity, CVD risk factors) rather than health (nutrition and physical activity).

Physical Activity. A public health goal for physical activity is to find ways to increase routine types of activities, such as walking and stair climbing, in which most adults can readily engage (e.g., in transportation, household, work and routine activity). Targeting and programming to specific audiences is an important component of effective interventions. There are particular life stages that are vulnerable with respect to inactivity—e.g., girls approaching puberty, and students transitioning to the workplace.

For people engaged in school or worksites, setting-specific programs that occur over a period of time were more cost effective than general mass media and community-wide events (Minnesota Heart Health Program (MPPH)).

For sedentary, older people (50 – 65 years) for whom it is easier to exercise at home, programs that offer some structure and on-going support via telephone calls or mail-supervision were more effective than class programs (completion of 75% of prescribed sessions versus 52%).

Neighborhood walking clubs is a “promising” approach.

With respect to worksites, health education classes by themselves are not very effective. On-site exercise facilities may not be necessary to increase employee physical activity

participation. Personal counseling has been found to be more effective at increasing regular physical activity than the presence of fitness facilities (the importance of personal counseling has repeatedly been found to be a critical component of cost-effective interventions—one study found that combining health education with personal counseling was 9 to 10 times more effective than health education by itself—the program focused on obesity and other CVD risks; the study reports a cost of less than \$3 per employee per year to reduce risks by one percentage point). The publication *Design of Workplace Health Promotion Programs* apparently lays out the essential elements of a successful health program at the worksite.

Using electronic media (computers, internet) is suggested as an emerging cost-effective alternative to personal counseling—messages can be personalized, targeted, tailored and interactive (75% of adults remember personalized messages about nutrition, compared to a 1/3 who remember non-personalized messages). The American Heart Association has released interactive software (*One of a Kind Health Improvement and Disease Management System*) that tailors information on an individual's readiness to change and customizes programming to reinforce behavioral changes.

People are more likely to maintain (beyond 6 months) moderate-intensity physical activity programs than vigorous-intensity programs.

Smart Growth that puts worksites close to residential settings so that people can walk or bicycle to work is a “promising” approach. Similarly, converting unused railroad tracks into commuter and recreational biking and walking paths is “promising.”

Tactically, it makes sense to incorporate messages and interventions around physical activity into broader health initiatives (e.g., cardiovascular disease). However, care must be taken that the physical activity does not get “lost in the shuffle” relative to other risk factors.

Nutrition. Interventions with respect to nutrition include changes in the food supply, point of choice nutrition information, and health and medical care related to nutrition.

Self-monitoring is an important element in a tool-kit for behavior change with respect to nutrition. Feedback is another important tool.

With respect to fat intake (which is affected by fruit and vegetable consumption), it appears that the most drastic reductions in fat intake met with the greatest success. Less stringent objectives, although intended to render the diets more acceptable by minimizing the level of change needed, may actually discourage people from making sufficient changes.

Both WIC (5 a Day program) and worksite programs have resulted in increased dietary fiber and fruit and vegetable intake.

Schools are an important setting for nutrition education and behavioral change. However, effective education and behavioral patterns require a multiple component prevention model from elementary through high school. Environmentally, the food supply, point of choice nutrition information, and collaboration with private sector food vendors are necessary components.

Point of choice (or purchase) nutrition information in supermarkets can be effective but effective programs usually require substantial cooperation of the vendor. The program must be maintained over a long period, and it helps to emphasize brand-specific choices. The Special Diet Alert in the Washington, D.C. area is an example of an effective supermarket intervention, as is the Minnesota Heart Healthy Program.

Restaurants are another important setting for point of choice nutrition information. There is evidence that people are more interested in learning about nutrition in “ordinary” daily eating establishments like cafeterias. They are less interested with respect to “special occasion” dinners. Messages that emphasize taste first and health secondarily are more effective in promoting selection of healthy foods. (MPPH’s *Dining a la Heart* is an example of an effective point of choice restaurant program).

A telemarketing campaign has been used in Australia to survey restaurants in 18 areas of health promotion and to also offer health promotion materials and tools in areas a restaurant is not involved in. They have demonstrated that health promotion increased in restaurants between 1997 and 2000—telemarketing might have contributed to the increase.

Alcohol Consumption. The Institute of Medicine estimates that 20% of the population are problem drinkers while only 5% are severely dependent alcoholics. The extensive treatment required for the severely dependent alcoholics is generally not available nor appropriate for heavy drinkers who are not severely dependent. A brief intervention (10 to 15 minutes, or up to 60 minutes) of a short, motivational counseling session that includes feedback and education in the harm of heavy drinking and advice to moderate drinking to low-risk, problem-free levels is a low-cost, effective preventive measure for heavy drinkers in outpatient settings. Heavy drinkers receiving brief interventions were two times more likely to moderate their drinking when compared with drinkers receiving no intervention.

Identifying workers with alcohol problems can be difficult and sensitive, and targeting in the workplace is often limited to those that are dependent. A general or CVD worksite wellness program can be an effective route to identifying and modifying the behavior of heavy drinkers. As with physical activity, personal counseling was much more effective than educational classes.

Mental Health. Anxiety and depressive disorders that are noted in primary care can be modestly affected by written self-help treatment (of the variety that is used between

session in a therapeutic setting). Interactive media for administering self-help treatment offers promise. There is no information about cost effectiveness.